



PCT

RAW SEQUENCE LISTING

DATE: 09/14/2004

PATENT APPLICATION: US/10/506,877

TIME: 09:53:14

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\09142004\J506877.raw

3 <110> APPLICANT: PRESIDENT AND FELLOWS OF HARVARD COLLEGE
 5 <120> TITLE OF INVENTION: DETECTION AND QUANTIFICATION OF MODIFIED PROTEINS
 7 <130> FILE REFERENCE: 56954 PCT (70207)
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/506,877
 C--> 10 <141> CURRENT FILING DATE: 2004-09-03
 12 <150> PRIOR APPLICATION NUMBER: 60/363,179
 13 <151> PRIOR FILING DATE: 2002-03-11
 15 <160> NUMBER OF SEQ ID NOS: 57
 17 <170> SOFTWARE: PatentIn Ver. 2.1
 19 <210> SEQ ID NO: 1
 20 <211> LENGTH: 6
 21 <212> TYPE: PRT
 22 <213> ORGANISM: Artificial Sequence
 24 <220> FEATURE:
 25 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 26 6X-His tag
 28 <400> SEQUENCE: 1
 29 His His His His His His
 30 1 5
 33 <210> SEQ ID NO: 2
 34 <211> LENGTH: 6
 35 <212> TYPE: PRT
 36 <213> ORGANISM: Artificial Sequence
 38 <220> FEATURE:
 39 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 40 peptide
 42 <400> SEQUENCE: 2
 43 Gly Phe Thr Ala Leu Lys
 44 1 5
 47 <210> SEQ ID NO: 3
 48 <211> LENGTH: 6
 49 <212> TYPE: PRT
 50 <213> ORGANISM: Artificial Sequence
 52 <220> FEATURE:
 53 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 54 peptide
 56 <400> SEQUENCE: 3
 57 Ala Leu Glu Leu Phe Arg
 58 1 5
 61 <210> SEQ ID NO: 4
 62 <211> LENGTH: 11
 63 <212> TYPE: PRT
 64 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING

DATE: 09/14/2004

PATENT APPLICATION: US/10/506,877

TIME: 09:53:14

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\09142004\J506877.raw

```

66 <220> FEATURE:
67 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
68     peptide
70 <400> SEQUENCE: 4
71 Leu Phe Thr Gly His Pro Glu Thr Leu Glu Lys
72   1           5           10
75 <210> SEQ ID NO: 5
76 <211> LENGTH: 5
77 <212> TYPE: PRT
78 <213> ORGANISM: Artificial Sequence
80 <220> FEATURE:
81 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
82     peptide
84 <400> SEQUENCE: 5
85 Ile Arg Asn Pro Asp
86   1           5
89 <210> SEQ ID NO: 6
90 <211> LENGTH: 10
91 <212> TYPE: PRT
92 <213> ORGANISM: Artificial Sequence
94 <220> FEATURE:
95 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic His
96     tag
98 <220> FEATURE:
99 <221> NAME/KEY: misc_feature
100 <222> LOCATION: (6)..(10)
101 <223> OTHER INFORMATION: This region may encompass 6-10 residues
103 <400> SEQUENCE: 6
104 His His His His His His His His
105   1           5           10
108 <210> SEQ ID NO: 7
109 <211> LENGTH: 12
110 <212> TYPE: PRT
111 <213> ORGANISM: Artificial Sequence
113 <220> FEATURE:
114 <223> OTHER INFORMATION: Description of Artificial Sequence: Exemplary
115     sequence of a signature peptide produced by
116     trypsin proteolysis
118 <400> SEQUENCE: 7
119 Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg
120   1           5           10
123 <210> SEQ ID NO: 8
124 <211> LENGTH: 60
125 <212> TYPE: PRT
126 <213> ORGANISM: Artificial Sequence
128 <220> FEATURE:
129 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
130     poly-ubiquitinated polypeptide
132 <400> SEQUENCE: 8

```

RAW SEQUENCE LISTING

DATE: 09/14/2004

PATENT APPLICATION: US/10/506,877

TIME: 09:53:14

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\09142004\J506877.raw

```

133 Met Pro Phe Ile Thr Ser Arg Pro Val Ala Lys Asn Ser Ser His Ser
134   1           5           10           15
136 Leu Ser Glu Thr Asp Leu Asn Gln Ser Lys Gly Gln Pro Phe Gln Pro
137           20           25           30
139 Ser Pro Thr Lys Lys Leu Gly Ser Met Gln Gln Arg Arg Arg Ser Ser
140           35           40           45
142 Thr Ile Arg His Ala Leu Ser Ser Leu Leu Gly Gly
143   50           55           60
146 <210> SEQ ID NO: 9
147 <211> LENGTH: 60
148 <212> TYPE: PRT
149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
153     poly-ubiquitinated polypeptide
155 <400> SEQUENCE: 9
156 Ala Asn Val His Ser Pro Ala Val Leu Asn Asn Thr Thr Lys Gly Gly
157   1           5           10           15
159 Asn Asn Asn Gly Asn Ile Arg Ser Ser Asn Thr Asp Ala Gln Leu Leu
160           20           25           30
162 Gly Lys Lys Gln Asn Lys Gln Pro Pro Pro Asn Ala Arg Arg His Ser
163           35           40           45
165 Thr Thr Ala Ile Gln Gly Ser Ile Ser Asp Ser Ala
166   50           55           60
169 <210> SEQ ID NO: 10
170 <211> LENGTH: 60
171 <212> TYPE: PRT
172 <213> ORGANISM: Artificial Sequence
174 <220> FEATURE:
175 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
176     poly-ubiquitinated polypeptide
178 <400> SEQUENCE: 10
179 Thr Thr Thr Pro Arg Ser Ser Thr Ser Asp Thr Asn Arg Arg Thr Ser
180   1           5           10           15
182 Gly Arg Leu Ser Val Asp Gln Glu Pro Arg Ile Ser Gly Gly Arg Tyr
183           20           25           30
185 Ser Gln Ile Glu Glu Asp Ser Thr Val Leu Asp Phe Asp Asp Asp His
186           35           40           45
188 Asn Ser Ser Ala Val Val Ser Ser Asp Leu Ser Ser
189   50           55           60
192 <210> SEQ ID NO: 11
193 <211> LENGTH: 60
194 <212> TYPE: PRT
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
199     poly-ubiquitinated polypeptide
201 <400> SEQUENCE: 11
202 Thr Ser Leu Thr Arg Leu Ala Asn Ser Lys Lys Phe Asn Glu Gln Phe

```

RAW SEQUENCE LISTING

DATE: 09/14/2004

PATENT APPLICATION: US/10/506,877

TIME: 09:53:14

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\09142004\J506877.raw

```

203      1              5              10              15
205 Leu Ile Glu Tyr Leu Thr Ala Arg Gly Leu Leu Gly Pro Lys Thr Val
206              20              25              30
208 Leu Ser Asn Glu Tyr Leu Lys Ile Ser Ile Ser Thr Ser Gly Glu Ser
209              35              40              45
211 Val Phe Leu Pro Thr Ile Ser Ser Asn Asp Asp Glu
212      50              55              60
215 <210> SEQ ID NO: 12
216 <211> LENGTH: 60
217 <212> TYPE: PRT
218 <213> ORGANISM: Artificial Sequence
220 <220> FEATURE:
221 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
222      poly-ubiquitinated polypeptide
224 <400> SEQUENCE: 12
225 Tyr Leu Ser Arg Leu Asn Gly Leu Asn Asp Gly Thr Asp Asp Ala Glu
226      1              5              10              15
228 Ala Asp Phe Phe Met Asp Gly Ile Asp Gln Gln Glu Gly Asn Thr Pro
229              20              25              30
231 Ser Leu Ala Thr Thr Ala Ala Ala Thr Glu Ser Gly Gly Ser Ile Asn
232              35              40              45
234 Glu Asn Arg Asp Thr Leu Leu Arg Glu Asn Asn Ser
235      50              55              60
238 <210> SEQ ID NO: 13
239 <211> LENGTH: 60
240 <212> TYPE: PRT
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
245      poly-ubiquitinated polypeptide
247 <400> SEQUENCE: 13
248 Gly Asp His Pro Gly Ser Gly Ser Glu Leu Asn Thr Arg Ser Val Glu
249      1              5              10              15
251 Ile Asp Ser Ser Met Val Ser Tyr Ser Ile Ala Val Ile Val Ser Val
252              20              25              30
254 Lys Lys Pro Thr Arg Phe Thr Asp Met Gln Leu Glu Leu Cys Ser Arg
255              35              40              45
257 Val Lys Val Phe Trp Asn Thr Gly Val Pro Pro Thr
258      50              55              60
261 <210> SEQ ID NO: 14
262 <211> LENGTH: 60
263 <212> TYPE: PRT
264 <213> ORGANISM: Artificial Sequence
266 <220> FEATURE:
267 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
268      poly-ubiquitinated polypeptide
270 <400> SEQUENCE: 14
271 Lys Thr Phe Asn Glu Glu Phe Tyr Asn Ala Ala Ser Met Lys Trp Asn
272      1              5              10              15

```

RAW SEQUENCE LISTING

DATE: 09/14/2004

PATENT APPLICATION: US/10/506,877

TIME: 09:53:14

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\09142004\J506877.raw

```

274 Leu Asn Asp Glu Asn Phe Asp Leu Phe Val Pro Leu Ser Ile Ser Pro
275          20          25          30
277 Asp Ile Asp Gln Met Glu Asn Asn Ser Asn Asp Arg Gln Met Arg Leu
278          35          40          45
280 Phe Lys Asn Ile Pro Thr Glu Glu Arg Leu Tyr Leu
281          50          55          60
284 <210> SEQ ID NO: 15
285 <211> LENGTH: 60
286 <212> TYPE: PRT
287 <213> ORGANISM: Artificial Sequence
289 <220> FEATURE:
290 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
291     poly-ubiquitinated polypeptide
293 <400> SEQUENCE: 15
294 Asp Lys Thr Lys Thr Lys Ala Ser Leu Leu Asn Ala Ile Asp Val Asn
295   1          5          10          15
297 Lys Thr His Leu Tyr Gln Pro Gly Asp Tyr Val Phe Leu Val Pro Val
298          20          25          30
300 Val Phe Ser Asn His Ile Pro Glu Thr Ile Tyr Leu Pro Ser Ala Arg
301          35          40          45
303 Val Ser Tyr Arg Leu Arg Leu Ala Thr Lys Ala Ile
304          50          55          60
307 <210> SEQ ID NO: 16
308 <211> LENGTH: 60
309 <212> TYPE: PRT
310 <213> ORGANISM: Artificial Sequence
312 <220> FEATURE:
313 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
314     poly-ubiquitinated polypeptide
316 <400> SEQUENCE: 16
317 Asn Arg Lys Gly Phe Tyr Arg Gln Asp Ser Asn Ser Pro Gln Pro Ile
318   1          5          10          15
320 Val Ser Pro Asp Ser Ser Ser Ser Leu Ser Ser Thr Thr Ser Ser Leu
321          20          25          30
323 Lys Leu Thr Glu Thr Glu Ser Ala Gln Ala His Arg Arg Ile Ser Asn
324          35          40          45
326 Thr Leu Phe Ser Lys Val Lys Asn His Leu His Met
327          50          55          60
330 <210> SEQ ID NO: 17
331 <211> LENGTH: 60
332 <212> TYPE: PRT
333 <213> ORGANISM: Artificial Sequence
335 <220> FEATURE:
336 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
337     poly-ubiquitinated polypeptide
339 <400> SEQUENCE: 17
340 Ser Ser His Gln Leu Lys Asn Glu Glu Ser Gly Glu Glu Asp Ile Phe
341   1          5          10          15
343 Ala Glu Tyr Pro Ile Lys Val Ile Arg Thr Pro Pro Pro Val Ala Val

```

VERIFICATION SUMMARY

DATE: 09/14/2004

PATENT APPLICATION: US/10/506,877

TIME: 09:53:15

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\09142004\J506877.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date